

## Abstract

Frequency of hepatitis D virus infection in individuals with hepatitis B surface antigen-positive (HBS Ag) in Ardabil province

Introduction: hepatitis D virus (HDV) and hepatitis B virus (HBV) co-infection is well known to induce a spectrum of acute and chronic liver disease which further advance to cirrhosis, fulminant hepatitis and hepatocellular carcinoma.

Aims: The aim of the present study was to determine the Frequency of hepatitis D virus super-infection among hepatitis B surface antigen (HBsAg) positive individuals.

Methods: The 200 HBsAg positive patients who had visited in liver clinic of Imam Khomeini Hospital were included in this study. Anti-HDV was measured by ELISA in the serum of these patients. patient demographic data and risk factors of transmission were recorded.

Results: The study included 121 males(60.5%) and 79(39.5%) females. HDV infection was detected in 3.5% (7/200) of (HBsAg) positive patients. The mean age of individuals positive for antibody to HDV was 53.85+13.3 years, and the mean age of nonreactive individuals was 37.17+12.73 years ( $p=0.001$ ). HDV infection was equally distributed between sexes. Comparing HBV/HDV co-infection to HBV mono-infection patients, more had cirrhosis (42.58% vs. 5.18%) ( $p=0.001$ ).

In this study, previous surgical procedures and blood transfusions were the most frequent risk factors in patients with HDV antibody.

Conclusion: The results show the endemicity of HDV infection in Ardabil. HDV infection increases the risk of severe liver fibrosis in this region.

Key words: Hepatitis B infection, Hepatitis D infection, cirrhosis, fulminant hepatitis, hepatocellular carcinoma.